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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,708	03/15/2004	Meng-Jyh Lin	LINM3016/EM	8974

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EXAMINER	
NGUYEN, LONG T	
ART UNIT	**PAPER NUMBER**
2816	

DATE MAILED: 04/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/799,708	LIN, MENG-JYH	
	Examiner	Art Unit	
	Long Nguyen	2816	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: on line 9 of page 6, "cascaded" should be changed to --cascoded--. Appropriate correction is required.

Claim Objections

2. Claims 1-7 are objected to because of the following informalities:

Claim 1, line 5, "connected the" should be changed to --connected to the--.

Claims 2-7 are objected to because they include the informality of claim 1.

Also, claim 5, lines 2-4, "cascaded" should be changed to --cascoded--.

Also, claim 6, line 2, "cascaded" should be changed to --cascoded--.

Also, claim 6, line 2, it appears that "detection voltage has twice level" needs to be changed to --detection voltage level is twice--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 4, the recitation "the second comparison voltage has a voltage level in the detection voltage level, thereby obtaining a required detection voltage level" on the last 2 lines is indefinite because it is not clear what exactly means by "a voltage level in the detection

voltage level, thereby obtaining a required detection voltage level". Clarification and/or appropriate correction is required.

With respect to claim 6, the recitation "the number of cascaded transistor pairs is two when the detection voltage has twice level as high as the second comparison voltage" on the last 2 lines is indefinite because it is misdescriptive. Note that claim 5 (which claim 6 depends on) recited that "a number of cascaded transistor pairs are added to the at least one transistor pair", so if the number of cascaded transistor pairs = 2, and added with the at least one transistor pair, then the total of transistor pairs = 3. However, the specification discloses "when the voltage to be detected is twice as high as the reference detection voltage, the stage of cascaded transistor pairs is 2, which applies two transistor pairs 51 and 52" (page 6, lines 13-15), i.e., the specification discloses the total number of transistor pairs is 2. Thus, claim 6 is misdescriptive because claim 6, as recited, would require 3 pairs (i.e., 2 pairs of cascaded + one pair originally = 3 pairs). Clarification and/or appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Tasdighi (USP 5,814,995).

With respect to claims 1-4, Figure 7 of the Tasdighi reference discloses a voltage detector circuit (R1-R3, 65, 66, 56), which includes a resistor pair (R2, R3) connected to an input voltage

(voltage at the junction node of resistors R2 and R3); a reference resistor (R1) connected to one resistor (R2) of the resistor pair (R2, R3) for producing a first comparison voltage (node of connected to the positive terminal of 56); at least one transistor pair (65, 66) connected to the other resistor (R3) of the resistor pair (R2, R3) and the reference resistor (R1) for producing a second comparison voltage (node connected to the negative terminal of 56); and a comparator (56) for comparing the first comparison voltage and the second comparison voltage for outputting a voltage level (Vout). Note that all the functional limitations in claims 2-4 are consider to be met because the structure of the voltage detector circuit (R1-R3, 65, 66, 56) in Figure 7 of Tasdighi is substantially identical to the voltage detector circuit of the invention (Figure 4), In re Best.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tasdighi (USP 5,814,995) in view of Fukami (USP 5,521,489).

With respect to claims 5 and 6, the voltage detector circuit (RR-R3, 65, 66, 56) in Figure 7 of the Tasdighi reference meets all the limitations of this claim except that the voltage detector circuit further includes a number of cascaded transistor pairs connected in cascaded to the at least one transistor pair. However, the Fukami reference discloses in Figure 4 a comparator circuit in comprising a plurality of cascaded transistor pairs (42-43, Col. 2, lines 5-7) in which the first

comparison voltage (Va), the second comparison voltage (Vb) and the output voltage (Vout) are depending on the plurality of cascaded transistor pairs. Thus, it would have been obvious to one having skill in the art at the time the invention was made to modify the voltage detector circuit in Figure 7 of the Tasdighi reference by providing a number of cascaded transistor pairs to the at least one transistor pairs (65, 66) for the purpose of setting the voltages of the voltage detector circuit to specific desired voltage levels, i.e., for detecting the voltage at a specific desire level. Thus, this combination/modification meets all the limitations of claims 5 and 6 because the structure of the combination/modification fully met the claims structure and substantially identical to applicant's invention (Figure 5), so if the detection voltage level is twice as high as the second comparison voltage then the number of pairs would also be 2.

9. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tasdighi (USP 5,814,995) in view of Malhi (USP 5,731,686).

With respect to claim 7, the voltage detector circuit (RR-R3, 65, 66, 56) in Figure 7 of the Tasdighi reference meets all the limitations of this claim except that the voltage detector circuit further includes the switch coupled between the resistor pair and the input voltage. However, the Malhi reference discloses in Figure 3 a circuit that including a switch (206) connected between the reference voltage and the input signal for switching the circuitry between the standby state and operation state. Thus, it would have been obvious to one having skill in the art at the time the invention was made to modify the voltage detector circuit in Figure 7 of the Tasdighi reference by providing a switch connected between the resistor pair and the input voltage as taught by the Malhi reference for the purpose controlling operational state and standby state of the circuitry and thus for saving the power consumption of the circuit because during a standby

state, the switch would be off and thus no current can flow through the resistor pair. Thus, this modification/combination meets all the limitations of claim 7.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directly to Examiner Long Nguyen whose telephone number is (571) 272-1753. The Examiner can normally be reached on Monday to Friday from 8:20am to 6:50pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Callahan, can be reached at (571) 272-1740. The fax number for this group is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

April 6, 2005

LONG NGUYEN
PRIMARY EXAMINER